



# Risk Management Terms

FM 100-14

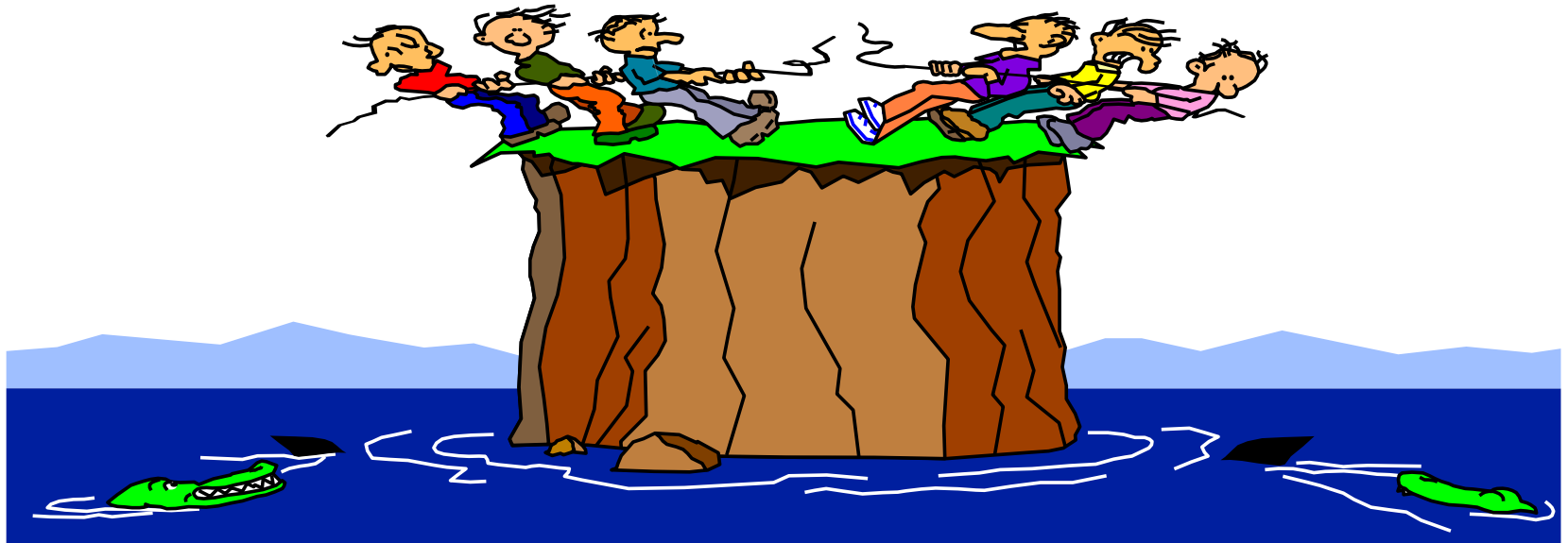
- ✓ Hazard
- ✓ Risk
- ✓ Risk Assessment
- ✓ Risk Management





# Hazard

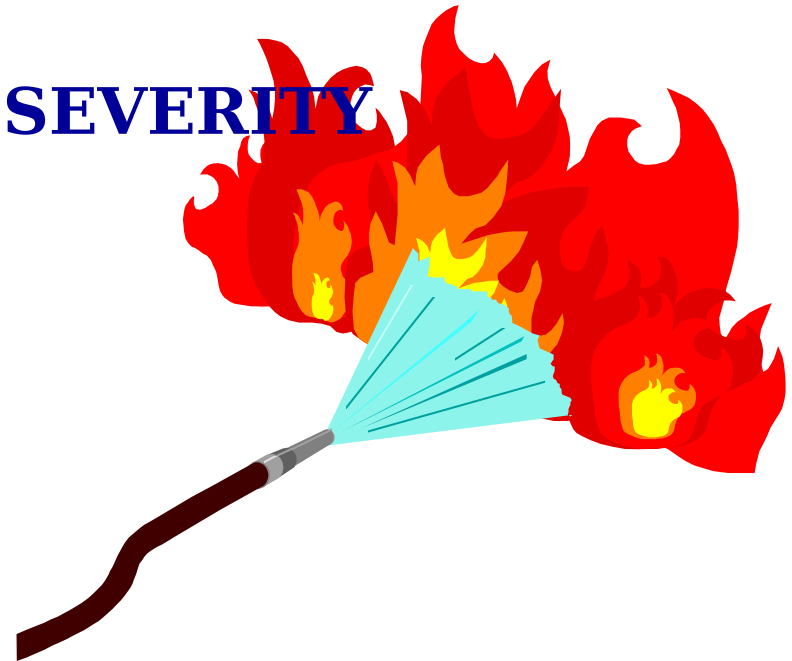
A Condition With the Potential  
For Causing Injury, Damage,  
Or Mission Degradation.





# RISK

**AN EXPRESSION OF POSSIBLE  
LOSS IN TERMS OF SEVERITY  
AND PROBABILITY**





# RISK ASSESSMENT

Using sound concepts to  
Detect

**HAZARDS** and Estimate the  
Risk

they Pose





# RISK MANAGEMENT PROCESS

- ✓ IDENTIFY HAZARDS
- ✓ ASSESS HAZARDS
- ✓ MAKE RISK DECISIONS
- ✓ IMPLEMENT CONTROLS
- ✓ SUPERVISE





# IDENTIFY HAZARDS

- ✓ Operational Analysis
  - Primary Job Task List
- ✓ Preliminary Hazard Analysis
  - List Hazards
  - List Possible Causes of Hazards



# ASSESS HAZARDS

- ✓ Prioritize Identified Hazards
  - Severity of Possible Loss
  - Probability of Possible Loss
- ✓ Risk Assessment Matrix



# Risk Assessment Matrix

# Risk Management Matrix

Matrix

			HAZARD PROBABILITY				
			Frequent	Likely	Occasional	Seldom	Unlikely
			A	B	C	D	E
SEVERITY	Catastrophic	I	EXTREMELY HIGH		HIGH		
	Critical	II	HIGH	HIGH			
	Marginal	III		MODERATE		LOW	
	Negligible	IV					





# MAKE RISK DECISIONS

- ✓ Consider Risk Control Options
  - Start with Most Serious Risk First
  - Refer to preliminary Hazard Analysis Causes
- ✓ Does Benefit Outweigh Risk
- ✓ Communicate with Higher Authority if Required



# IMPLEMENT CONTROLS

- ✓ Engineering Controls
  - Design out the hazard – consider alternatives
  - Design a guard around the hazard
  - Warning devices (control indicators)
- ✓ Administrative Controls
  - Procedures
  - Training
  - Signage
  - Awareness (“you be careful...”)
- ✓ Personal Protective Equipment



# SUPERVISE

- ✓ Monitor for Effectiveness of Controls
- ✓ Watch for Changes





# OPERATIONAL RISK MANAGEMENT

## Levels of Application

- ✓ Hasty- On the Run Consideration
- ✓ Deliberate- Application of the Complete 5-Step Process
- ✓ In-Depth- Complete 5-Step Process With Detailed Analysis



# **Applying Risk Management**

- ✓ **Operational Task Outline: Certify  
Magazines Explosives Free**
  - **Unlock & open door**
  - **Inspect/test for explosives  
contamination**
  - **Complete inspection record**
  - **Close and seal door**



# Applying Risk Management

- ✓ **Operational Task Outline - FWDA, December 1999**
- ✓ **Step 1: Identify Hazards**
  - **1 hour+ drive from nearest airport (accidents/become lost)**
  - **Weather -cold, snow -(hypothermia, slips/falls, vehicle accidents)**
  - **Limited daylight (unable to see to perform task, become lost in area)**
  - **Unknown conditions (assumed empty, may contain material)**
  - **Inexperienced personnel - incorrect certification**
  - **Animals, insects - Hanta virus (personnel exposure)**
  - **Explosives contamination/hazmat (personnel exposure)**
  - **No igloo utilities (cold/poor visibility)**
  - **Degraded/malfunctioning equipment (Doors)**



# Applying Risk Management

## ✓ Step 2: Assess Hazards, define risk

- Travel to site *Marginal/occasional* *Moderate*
- Weather *Marginal/likely* *Moderate*
- Limited daylight *Marginal/likely* *Moderate*
- Unknown conditions *Marginal/occasional* *Moderate*
- Incorrect certification *Marginal/occasional* *Moderate*
- Animals, insects - Hanta virus *Critical* *Seldom*  
*Moderate*
- Explosives/hazmat *Marginal/occasional* *Moderate*
- No igloo utilities (cold/poor visibility) *Marginal/likely*  
*Moderate*
- Stuck doors *Marginal/likely* *Moderate*

Before controls:

“Moderate” Risk mission



# **Applying Risk Management**

- ✓ **Controls lower severity or probability**
  - **Engineering**
  - **Procedural**
  - **Protective Equipment**
  
- ✓ **Lowering the risk of one hazard may increase risk for another**
  - **PPE reduces mobility, increases fatigue**





# Applying Risk Management

## ✓ Step 3: Develop Controls

### ➤ Personnel selection

- Experienced
- Certified and Physically capable for PPE/HAZMAT
- Designated team leader with on-ground decision authority

### ➤ Equipment

- PPE (shoes, gloves)
- Door sticks, flashlights, batteries, maps, sampling kits
- Standard checklists

### ➤ Training

- Weather, hanta virus precautions, local threats

### ➤ Procedures

- Initial on site training, spot checks
- Buddy system in place
- Limited hours of operations
- Designated check in times in admin areas (lunch, breaks)
- Daily AARs, next day planning



# Applying Risk Management

## ✓ Step 2 (again): Reassess Hazards, define risk

- Travel to site *Marginal/seldom* **LOW**
- Weather *Marginal/occasional* **Moderate**
- Limited daylight *Negligible/likely* **Moderate**
- Unknown conditions *Negligible/occasional* **LOW**
- Incorrect certification *Marginal/Unlikely* **LOW**
- Animals, insects - Hanta virus *Critical/ Unlikely* **LOW**
- Explosives contamination/hazmat  
*Negligible/occasional* **LOW**
- No igloo utilities (cold/poor visibility)  
*Negligible/likely* **LOW**
- Stuck doors *Negligible/likely* **LOW**

After controls: Still a “Moderate” Risk mission

**BUT - Controls reduce severity or probability for each**



# **Applying Risk Management**

- ✓ **Step 4: Make Risk Decisions**
  - **Delay the mission? No - required for BRAC**
  - **Select experienced, capable personnel**
  - **Confirm the mission**
  - **Review approve procedures**
  
- ✓ **Take no unnecessary risks**



# **Applying Risk Management**

- ✓ **Step 5: Supervise and Evaluate**
  - **On-ground leader has operational authority**
    - **Required to update JSA before changing methods**
    - **Conducts daily AARs to implement lessons learned**
  - **Increased risk requires higher level review and approval**



# Typical Worksheet

Risk Management

The work sheet (Figure A-2) provides a starting point to logically track the process of hazards and risks. It can be used to document risk management steps taken during planning, preparation, and execution of training and combat missions and tasks.

A. Mission or Task:		B. Date/Time Group Begin: End:		C. Date Prepared:	
D. Prepared By: (Rank, Last Name, Duty Position)					
E. Task	F. Identify Hazards	G. Assess Hazards	H. Develop Controls	I. Determine Residual Risk	J. Implement Controls ("How To")
SAMPLE					
K. Determine overall mission/task risk level after controls are implemented (circle one) LOW (L)    MODERATE (M)    HIGH (H)    EXTREMELY HIGH (E)					

Appendix-2  
Figure A-2. Sample Risk Management Work Sheet



# RISK MANAGEMENT RULES

- ✓ Integrate Into Planning
- ✓ Accept No Unnecessary Risks
- ✓ Make Risk Decisions at the Proper Level
- ✓ Accept Risk If Benefits Outweigh the Cost





# SUMMARY

- ✓ RISK MANAGEMENT IS A SYSTEMATIC WAY OF THINKING



- ✓ INCREASES HAZARD AWARENESS AND PROVIDES FRAMEWORK FOR REDUCING OPERATIONAL RISK